| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/503,122 | 02/14/2000 | Leon Saltsov | WH-10752US | 6124 |

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| EXAMINER |
|---|
| SHAPIRO, JEFFERY A |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3651 | |

DATE MAILED: 01/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 09/503,122 | SALTSOV ET AL. |
| | Examiner | Art Unit |
| | Jeffrey A. Shapiro | 3651 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _19 November 2001_ .

2a)☒ This action is **FINAL.**     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-6,8 and 10-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-6,8 and 10-20_ is/are rejected.

7)☒ Claim(s) _18_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

# DETAILED ACTION

## Claim Objections

1.     Claim 18 is objected to because of the following informalities:  in line 3, the term

"modules" appears to be more correct as "module".  Appropriate correction is required.

## Claim Rejections - 35 USC § 112

2.     The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

3.     Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

In line 3 of Claim 20, it is unclear what the "central processing unit" is being

"updated" with.

## Claim Rejections - 35 USC § 102

4.     Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Meyer et al.

Meyer et al disclose the serial flash memory module as follows.

As described in Claim 6;

1.     a read only memory which includes an identification code specific

to the serial flash memory module (see col. 17, lines 40-47);

2.     a rewritable memory containing an encrypted operating software

col.17

(see lines 50 and 51);

3.     said encrypted operating software including an encryption of at

least part of said identification code (note that the encryption key "may be

used to encrypt any data stored in the phone"—see lines 51-54, which

said data also inherently includes said identification code);

### Claim Rejections - 35 USC § 103

5.      Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mazur et al (US 6,241,069) in view of Meyer et al.  Mazur et al discloses a bank

validator as follows.

As described in Claims 1, 6 and 9;

> 1.      a banknote processing channel (18);

> 2.      a series of sensors located along said channel (note scan head in

> figure 8);

> 3.      a central processing unit (1610);

> 4.      a removable memory storage arrangement (82)

As described in Claim 9;

> 5.      said validator includes a testing procedure (see col. 36, lines 33-

> 53);

Mazur et al does not expressly disclose the following.

As described in Claim 1;

> 1.      said central processing unit including a testing procedure which

> evaluates the integrity of any received removable memory storage

> arrangement for operation thereof upon positive evaluation of the integrity

> of said removeable memory storage arrangement;

As described in Claim 2;

2. said removable memory storage arrangement is a serial flash module;

As described in Claims 3 and 11;

3. the removable memory storage arrangement includes an electronic address available to the central processing unit, and the electronic address is used to confirm the encoded software;

As described in Claim 4;

4. a serial flash module contains information to be downloaded to the central processing unit;

5. said central processing unit (CPU) of the validator will not allow the validator to operate if a serial flash memory module is not inserted therein;

As described in Claim 5;

6. the removable flash module contains encrypted algorithms used by the central processing unit to evaluate banknotes;

7. the CPU includes decryption software;

As described in Claim 6;

8. a serial flash

As described in Claim 7;

9. said removable memory storage arrangement contains an encrypted information and said CPU includes a logic for using the encrypted information;

As described in Claims 8 and 14;

10.    said removable memory storage arrangement provides additional

memory available to said CPU;

As described in Claims 10 and 15;

11.    said removable memory storage arrangement contains encrypted

algorithms used by the CPU;

As described in Claim 12;

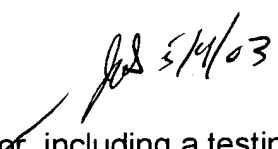12.    said serial flash module contains information to be downloaded to

the CPU;

13.    said serial flash module after downloading of said information

including a security feature such that said serial flash module can not be

used with other validators;

As described in Claim 13;

14.    said serial flash module records the electronic address of the

validator when received in a receiving arrangement and only

communicates with said CPU when there is a match between the

recorded electronic address provided by the validator;

Meyer et al discloses the following.

As described in Claim 1;

· 1.    said central processing unit (1) of including a testing procedure

which evaluates the integrity of any received removable memory storage

arrangement for operation thereof upon positive evaluation of the integrity

of said removeable memory storage arrangement (see col. 16, lines 60-67

and col. 17, lines 1-35 and 61-63 of Meyer et al);

As described in Claims 3 and 11;

2.      the removable memory storage arrangement includes an electronic

address available to the central processing unit, and the electronic

address is used to confirm the encoded software (see col. 17, lines 40-

56);

As described in Claim 4;

3.      a serial flash module contains information to be downloaded to the

central processing unit (see col. 17, lines 58-60 and col. 20, lines 7-17);

4.      said central processing unit (CPU) of the validator will not allow the

validator to operate if a serial flash memory module is not inserted therein

(see col. 3, lines 9-17, col. 16, lines 37-50 and col. 17, lines 61-63);

As described in Claim 5;

5.      the removable flash module (5) contains encrypted algorithms used

by the central processing unit to evaluate banknotes (see col. 16, lines 24-

48—note that although coins are expressly disclosed, bills or banknotes

are considered functional equivalents of each other);

6.      the CPU includes decryption software (see col. 16, lines 63-67 and

col. 17, lines 1-32);

As described in Claim 6;

a serial flash having as follows.

7.      a read only memory which includes an identification code specific

to the serial flash memory module (see col. 17, lines 40-47);

8.      a rewritable memory containing an encrypted operating software

(see col. 17 lines 50 and 51);

9.      said encrypted operating software including an encryption of at

least part of said identification code (note that the encryption key "may be

used to encrypt any data stored in the phone"—see col. 17, lines 51-54,

which said data also inherently includes said identification code);

(Note that col. 16, lines 24-26 refers to a serial programming method.)

As described in Claim 7;

10.     said removable memory storage arrangement contains an

encrypted information and said CPU includes a logic for using the

encrypted information, (see col. 16, lines 63-67 and col. 17, lines 1-32);

As described in Claims 8 and 14;

11.     said removable memory storage arrangement provides additional

memory available to said CPU;

As described in Claims 10 and 15;

12.     said removable memory storage arrangement contains encrypted

algorithms used by the CPU;

As described in Claim 12;

13.     said serial flash module contains information to be downloaded to

the CPU;

14.    said serial flash module after downloading of said information including a security feature such that said serial flash module can not be used with other validators (see col. 17, lines 40-56);

As described in Claim 13;

15.    said serial flash module records the electronic address of the validator when received in a receiving arrangement and only communicates with said CPU when there is a match between the recorded electronic address provided by the validator (see col. 17, lines 40-56);

Both Mazur et al and Meyer et al are analogous art as they both concern the use of flash memory cards in currency handling devices. Further, both Mazur et al and Meyer et al concern the handling of currency, where security is considered an important element.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have used the encryption scheme and flash memory card of Meyer et al in the bill handling system of Mazur et al.

The suggestion/motivation would have been to use a flash memory card to "promote product firmware security and configuration control". See abstract of Meyer et al. Note also that currency handlers inherently and routinely require and employ security measures, techniques and devices.

Regarding Claim 2, note that said removable memory storage arrangement being a serial flash module is well known by those ordinarily skilled in the art as a functional

equivalent to other types of flash memory, such as PCMCIA cards, or Sony Corp's

Memory Stick. (See col. 35, lines 35-50 of Mazur et al.) Therefore, it would have been

obvious for one ordinarily skilled in the art to have used a serial flash module as a

removable flash card in the device of Mazur et al.

Therefore, it would have been obvious to combine Mazur et al with Meyer et al to

obtain the invention as specified in Claims 1-15.

6.      Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mazur et al in view of Itako et al. Mazur et al discloses the banknote validator as

follows.

As described in Claim 16;

    1.      a banknote channel;

    2.      a series of sensors located along said channel;

    3.      a central processing unit;

    4.      a receiving location for receiving a memory storage arrangement;

Mazur et al does not expressly disclose the following.

As described in Claim 16;

    5.      removable sensors;

    6       said banknote validator **can** be updated by replacing at least some

of said removable sensors with new removable sensors and updating said

central processing unit to operate with said new sensors by downloading

banknote processing information from said received removable memory

storage arrangement;

As described in Claim 17;

    7.    said downloaded banknote processing information is specific to said new removable sensors;

As described in Claim 18;

    8.    said removable sensors include a series of removable sensor modules and each sensor module includes at least one sensor;

Itako et al discloses the following.

As described in Claim 16;

    1.    removable sensors (7a and 7b);

    2    said banknote validator **can** be updated by replacing at least some of said removable sensors with new removable sensors and updating said central processing unit to operate with said new sensors by downloading banknote processing information from said received removable memory storage arrangement;

As described in Claim 17;

    3.    said downloaded banknote processing information is specific to said new removable sensors (note that it would be, at the very least, inherent to download specific processing information to said new removable sensors, as various sensors require certain programs, software, and reference data such as pattern profiles of particular currency in order to function—see Mazur et al, figure 21, elements 2120 and 2116, for example);

As described in Claim 18;

    4.      said removable sensors include a series of removable sensor modules and each sensor module includes at least one sensor (see figures 1 and 3);

Both Mazur et al and Itako et al are analogous art as they both concern the use of currency handling devices employing sensors.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have used removable sensors of Itako et al in the bill handling system of Mazur et al.

The suggestion/motivation would have been to promote security and reduce currency counterfeiting by interchanging sensors. See col. 2, lines 25-31 of Itako et al. Note also that currency handlers inherently and routinely require and employ security measures, techniques and devices.

Therefore, it would have been obvious to combine Mazur et al and Itako et al to obtain Claims 16-18.

7.    Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazur et al in view of Meyer et al and further in view of Itako et al. Mazur et al discloses the banknote validator as follows.

As described in Claims 16 and 19;

    1.      a banknote channel;

    2.      a series of sensors located along said channel;

    3.      a central processing unit;

    4.      a receiving location for receiving a memory storage arrangement;

Mazur et al does not expressly disclose the following.

    As described in Claims 16 and 19;

        1.      removable sensors;

        2      said banknote validator **can** be updated by replacing at least some

of said removable sensors with new removable sensors and updating said

central processing unit to operate with said new sensors by downloading

banknote processing information from said received removable memory

storage arrangement;

        3.      encryption schemes for maintaining the integrity of flash memory

modules;

    As described in Claims 17 and 20;

        4.      said downloaded banknote processing information is specific to

said new removable sensors;

    As described in Claim 18;

        5.      said removable sensors include a series of removable sensor

modules and each sensor module includes at least one sensor;

Meyer et al discloses the following.

    As described in Claims 16 and 19;

        1.      encryption schemes for maintaining the integrity of flash memory

modules (see prior discussion on Meyer et al, above);

Itako et al discloses the following.

As described in Claim 16;

2.    removable sensors (7a and 7b);

3    said banknote validator **can** be updated by replacing at least some

of said removable sensors with new removable sensors and updating said

central processing unit to operate with said new sensors by downloading

banknote processing information from said received removable memory

storage arrangement;

As described in Claim 17;

4.    said downloaded banknote processing information is specific to

said new removable sensors (note that it would be, at the very least,

inherent to download specific processing information to said new

removable sensors, as various sensors require certain programs,

software, and reference data such as pattern profiles of particular currency

in order to function—see Mazur et al, figure 21, elements 2120 and 2116,

for example);

As described in Claim 18;

5.    said removable sensors include a series of removable sensor

modules and each sensor module includes at least one sensor (see

figures 1 and 3);

Mazur et al, Meyer et al and Itako et al are analogous art as they all concern the

use of currency handling devices employing sensors.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have used removable sensors of Itako et al in the bill handling system of Mazur et al.

The suggestion/motivation would have been to promote security and reduce currency counterfeiting by interchanging sensors. See col. 2, lines 25-31 of Itako et al. Note also that currency handlers inherently and routinely require and employ security measures, techniques and devices.

Further, it would have been obvious to one of ordinary skill in the art to have employed the encryption schemes of Meyer et al in the bill handling system of Mazur et al.

The suggestion/motivation would have been to use a flash memory card to "promote product firmware security and configuration control". See abstract of Meyer et al. Note also that currency handlers inherently and routinely require and employ security measures, techniques and devices.

Therefore, it would have been obvious to combine Mazur et al, Meyer et al and Itako et al to obtain Claims 16-20.

### Double Patenting

8.      The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application.  See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer.  A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9.      Claims 1-20 are rejected under the judicially created doctrine of obviousness-

type double patenting as being unpatentable over Claims 1-18 of U.S. Patent No.

6,142,284 in view of Meyer et al.  The claims of the '284 patent disclose a banknote

validator having removable sensors, memory and a central processing unit.  Meyer et al

discloses a currency validator having flash memory and using encryption techniques to

secure the flash memory-based system.

## Response to Arguments

10.     Applicant's arguments with respect to Claims 1-6, 8 and 10-15 have been

considered but are moot in view of the new ground(s) of rejection.

## Conclusion

11.     The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.  Mazur (US 6,039,645), Haggerty et al, Panzeri et al, Watts et al,

Korman et al, Gottlich et al, Rosen (US 5,774,553, US 5,557,518 and US 5,799,087),

Silverbrook et al, Shimada et al, Molbak et al, Levine et al are all cited as examples of

currency apparatus using flash memory and encryption techniques.

12.     Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP

§ 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37
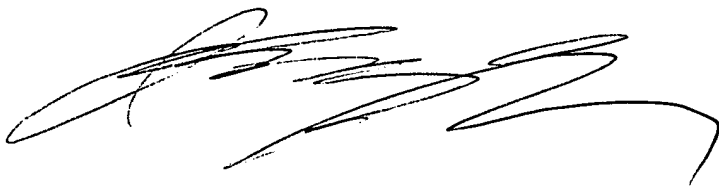
CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jeffrey A. Shapiro whose telephone number is

(703)308-3423. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher P. Ellis can be reached on (703)308-2560. The fax phone

numbers for the organization where this application or proceeding is assigned are

(703)308-0552 for regular communications and (703)308-0552 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)308-

1113.

Jeffrey A. Shapiro
Patent Examiner,
Art Unit 3651

January 22, 2002

CHRISTOPHER P. ELLIS
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